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A Complimentary Publication

Catastrophic Consequences of Spinal Epidural Hematomas

Development of an epidural hematoma can have devastating consequences if not recognized in a timely manner. For this reason, we thought you may be interested in knowing more about this condition.

There are many procedures and surgeries that put a patient at risk for developing a spinal epidural hematoma. These include:

- ◆ Spinal surgery
- ◆ Epidural steroid injection
- ◆ Epidural catheters used in pain management or obstetrical analgesia
- ◆ Lumbar punctures
- ◆ Orthopedic surgeries

Risk factors for the development of a spinal epidural hematoma include:

- ◆ Coagulopathies or bleeding problems due to either a disease process, an autoimmune condition or genetics
- ◆ Anticoagulant therapy (including deep vein thrombosis or DVT prophylaxis)
- ◆ Age > 60
- ◆ Nonsteroidal anti-inflammatory drugs (This drug class inhibits platelet function.) There is a 12-fold increase in the risk of bleeding if the patient is also on anticoagulants.
- ◆ Rh positive blood type
- ◆ Hemoglobin <10
- ◆ Surgical blood loss > 1 liter
- ◆ Chronic renal failure

For an illustration of a spinal epidural hematoma see this link. <http://tinyurl.com/2dk6yo3>

Signs and symptoms of a spinal epidural hematoma include:

- ◆ Severe localized pain
- ◆ Weakness (either one or both sides)
- ◆ Numbness with tingling of the area that is supplied by the compressed nerve(s)
- ◆ Diminished reflexes
- ◆ Urinary incontinence
- ◆ Fecal incontinence and decreased anal sphincter tone.

A spinal epidural hematoma is diagnosed by an MRI, the gold standard in identifying space occupying lesions.

Treatment includes reversal of any coagulopathy by administering vitamin K, platelets or fresh frozen plasma and an emergency laminectomy to decompress the spinal cord. If not performed within 12 hours of the first symptoms, the damage will be irreversible, however, the best outcomes are achieved when there is less than an 8-hour delay.

One of the most common allegations in these types of cases involve miscommunication-either the nurse's failure to communicate changes in the patient's condition, a delay in communicating these changes or reporting

the changes to the wrong provider resulting in a delay in diagnosis. If a case involves anesthesia such as a patient with an epidural catheter in place, changes in the patient's condition in this regard should be reported to the anesthesia provider, not the hospitalist or covering physician.

In one case, a 63-year-old man underwent an abdominal aortic aneurysm repair with epidural anesthesia. It was decided to leave the catheter in place and use it for pain management after surgery since he received Heparin, an anticoagulant, during surgery and he had prolonged bleeding times. He was not able to move his legs in the recovery room. There was no further neurological evaluation and the anesthesiologist was not notified. Four hours later he complained of severe low back pain to the floor nurse, who called the intern to report the back pain.

Neurological damage can be reversed if the pressure or ischemia (reduced blood flow) to the spinal cord can be relieved within 8-12 hours.

There was no mention to the doctor that he was unable to move his legs. The intern increased his morphine. The nurse called the intern back an hour later to report his pain was unrelieved. The doctor came up to see the patient and his impression was that he had muscle spasms due to pain. Anesthesia was not contacted until 6:00 a.m. but surgery was not possible, since more than 12 hours had elapsed since the first complaint. The window of opportunity was lost to reverse the damage that was done to his spinal cord from pressure and ischemia of the nerves and he was left a paraplegic with bowel and bladder incontinence. The other failures in this case included: the failure on the part of the physician to include a spinal epidural hematoma as part of his differential diagnosis and the nurse's failure to frequently assess circulation, motor and sensory status as would be dictated by the standard of care for a patient with an epidural.

Source: AALNC 2010 conference session.

Watch out for Robitussin DM

Dextromethorphan (Delsym, Robitussin DM) is a widely available over-the-counter cough and cold preparation. *Worst Pills, Best Pills News* has listed it as a "Do Not Use" drug because clinical trials have not found it to be effective and because of the growing evidence that it can have toxic effects when combined with other medications.



When combined with medications that increase serotonin levels, seizures, coma and death can occur. Symptoms of severe serotonin syndrome include: muscle jerking, muscle rigidity, tremors, overactive reflexes, fever, sweating, shivering, confusion and agitation

Some of the drugs that can interact with Dextromethorphan are:

- ◆ BuSpar (buspirone) antidepressant
- ◆ Celexa (citalopram) antidepressant
- ◆ Flexeril (cyclobenzaprine) muscle relaxer
- ◆ Pristiq (desvenlafaxine) antidepressant
- ◆ Cymbalta (duloxetine) antidepressant and antianxiety
- ◆ Lexapro (escitalopram) antidepressant and antianxiety
- ◆ Actiq, Duragesic (fentanyl) narcotic pain reliever
- ◆ Prozac (fluoxetine) antidepressant
- ◆ Zyvox (linezolid) antibiotic
- ◆ Demerol (meperidine) narcotic pain reliever
- ◆ Paxil (paroxetine) antidepressant and antianxiety
- ◆ Darvon or Darvocet (propoxyphene) narcotic pain reliever
- ◆ Zoloft (sertraline) antidepressant
- ◆ Ultram (tramadol) narcotic pain reliever
- ◆ Desyrel (trazodone) antidepressant and sleep aid
- ◆ Effexor (venlafaxine) antidepressant and antianxiety

Source: *Worst Pills, Best Pills News*, June 2010.

We would like to wish you and your staff a happy and prosperous New Year. We look forward to the opportunity to help you in the coming year to reach a successful outcome for your clients. ~ Sharon

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